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Change History Log:

April 3, 2003   **In Response Reply to: 03EDU0128**

Department of Education
Federal Student Aid
Steve Allison
Contracting Officer's Representative

Subject: Contract # ED-99-DO-0002
           Task Order # 117 EAI Core Release 4.0
           Deliverable 117.1.4 EAI Configuration Management Plan

Dear Mr. Allison:

Enclosed is the revised EAI Configuration Management Plan for the EAI production code baseline that is required by the subject task order. Attached are suggested changes from the reviewers. Future revisions are not planned, but as with any such plan, the document will be updated as appropriate.

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117.1.4 EAI Configuration Management Plan – Significant Concerns

Suggested Changes/Comments	Page	Author	Date	Change Made Y/N	Comment
No discussion was found about who authorizes changes that are controlled by Configuration Management (CM). There is no discussion about a Configuration Control Board (CCB) or equivalent authority associated with the CM process.	Whole Document	IV&V	3/20/2003	Y	Typically CM controls, but does not authorize changes. Explain the working relationships among those who authorize/approve changes, those (e.g., CM) who control versions of changed software, and those who make the changes (e.g., Developers). EAI Response: This scope of this deliverable is to cover "the production baseline" instead of the entire CM organizational and approval structure. Included in this "software CM Plan" however are the authorization/approval processes related to the configuration activities which are within scope though.

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117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
					With regard to the movement of Production baseline code into production, additional information was added to Section 6.0 regarding the FSA Enterprise Change Management Tool, which provides for approvals and authorizations for all production code changes.
The overall organizational structure, associated with and performing CM, is not defined.	Whole Document	IV&V	3/20/2003	N	Define the organizational structure associated with the CM process. Explain who exercises oversight and direction to CM personnel. EAI Response: SCM Roles & Responsibilities are described in Section 2.4. All other organizational structure (management who provides direction to the CM Lead) is out of scope for this deliverable. The project manager generally appoints the CM Lead and the CM Lead conducts the Teams CM activities at the appropriate Change Control groups and boards (including at the enterprise level).
No discussion was found with respect to CM reports and reporting for internal control purposes or for reporting CM status to others.	Whole Document	IV&V	3/20/2003	Y	Explain the nature of reports that will be executed in support of CM processes. Also explain to whom CM will report CM results. EAI Response: Referenced EAI's general CM procedures for Audit & Status reporting as part Appendix A, which is now called "EAI Production Code

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117.1.4 EAI Configuration Management Plan – Significant Concerns					
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					Baseline Configuration Item Index (CII)" Changes to these files are tracked and reported on by the CM Lead. Periodic Audits are performed in accordance with the EAI team's broader CM planning and procedures (updates recorded in the CII's "change column")
No discussions were found with respect to the following topics in the context of applying CM: • Configuration reviews and audits • CM control of 3rd party software (e.g., COTS, GOTS, NDI) • Software baselines.	Whole Document	IV&V	3/20/2003	Y	Explain the nature of CM processing relative to each of the indicated topics. EAI Response: - Configuration audits are performed on the EAI's Configuration Item Index (see Appendix A) - 3rd party software is owned by VDC - addressed in section 2.3.2 - EAI configuration Item Index is included in the document as Appendix A and is the production code baseline for EAI as of the current date
No discussion was found with respect to the expected response time for CM actions. No time frames are given to indicate how long various CM actions are likely to take.	Whole Document	IV&V	3/20/2003	Y	Typically, a Plan provides schedule/time table information in order to provide guidance with respect to the normal duration of various CM processes. Identify the expected time to complete various CM actions. EAI Response: Added references to expectations of timely actions with regard to Check-in, check-out (immediate) and migration

117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
					(in a timely manner) Additionally, required lead times for changes to production code at the data center were added to section 6.0. (14 days for non-emergency etc.)
Statement "The purpose of this document is to communicate EAI approach to managing the software components that make up the FSA EAI architecture". Stated purpose is very general and vague. It does not identify the specific types of information that is being communicated. It is unclear to whom this approach is being communicated. It also does not explain the meaning of "managing the software components" including who does it and how they do it.	Page 3, section 1.1	IV&V	3/20/2003	Y	Identify the intended readers/users of this document and how they are expected to use this document. EAI Response: Extensive clarification provided regarding the intended audience and the intended information that is being communicated. Specifically, the audience is EAI Team members (possibly outside stakeholders as well) and the information is now very clearly defined as "the very specific realities of managing the EAI production code baseline (i.e. versioning, packaging and migrating items in the production code baseline)."
Appendices A through G are listed, but most are not clearly referenced in other sections nor the use of the information presented in each Appendix with respect to CM.	Page 3, section 1.2	IV&V	3/20/2003	Y	For each Appendix, explain the use of the information presented in the appendix with respect to CM processes. EAI Response: Additional references to appendices added throughout document where appropriate and short descriptions of each appendix added.
Statement " … tools, processes, and people …" ClearCase and MQSoftware Qpasa! are identified in section 2.5 as CM tools, but it is unclear	Page 4, section 2.1 Page 6, section 2.4	IV&V	3/20/2003	Y	Clearly identify/list the complete set of tools, processes, and people involved in ensuring the integrity of the EAI architecture.

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117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
if other tools are also used for CM. Processes are discussed, but it is unclear if these are a complete set of CM processes. The names of a few people are mentioned at various places in this CM Plan, but there is no single list of people that are mapped to the Roles & Responsibilities listed in section 2.4.	Page 7, section 2.5				EAI Response: Additional clarification was added to identify which "role" is "responsible" for the management of the Rational ClearCase Repository and the MQSoftware QPasa! Tool.
Diagram shows "Check Out", but text does not discuss this process.	Page 5, section 2.2 diagram	IV&V	3/20/2003	Y	Discuss checkout process using ClearCase. EAI Response: Added clarification that the EAI CM Lead is responsible for authorizing the "Checkout" of files under SCM. A request is made of the CM Lead by a team member and the CM Lead records the request and the associated activity/changes to the checked-out file in the Production Code Baseline Configuration Item Index (CII). Only the CM lead is authorized to make updates to the Production Code Baseline CII in ClearCase.
There is no specific discussion of CM record-keeping and reporting. It appears that these functions are supported using ClearCase.	Page 5, section 2.2	IV&V	3/20/2003	Y	Discuss the nature/scope of CM record-keeping and reporting. For example, explain what CM reports are generated, who generates them and who gets them and how often they are generated in order to manage software components/changes. EAI Response: It is correct that these functions are supported using ClearCase. Also added references to EAI's

117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
					broader CM Plan, which includes provisions for CM Audits and Reporting. This includes record keeping such as the EAI Production Code Baseline Configuration Item Index (Appendix A)
This section identifies 6 types of software components. It is not stated in this section, but implied by other sections that CM manages all software components.	Page 5, section 2.3, bullets	IV&V	3/20/2003	Y	Clarify that all listed software components are placed under CM control. EAI Response: Additional clarification added (that all listed software components are placed under CM control.) Other types of CM software components that need to be kept under SCM will be added as appropriate
This section does not clearly identify responsibilities of each party with respect to CM tools (e.g., ClearCase and MQSoftware Qpasa!).	Page 6, section 2.4	IV&V	3/20/2003	Y	Clarify CM roles and responsibilities of personnel relative to the use of CM tools. For example, do all EAI team members need access to and training in using ClearCase and MQSoftware Qpasa!? EAI Response: Responsible role (CM Lead) identified regarding each tool.
This section identifies 5 environments, but does not discuss CM responsibilities relative to these environments.	Page 7, section 2.6	IV&V	3/20/2003	Y	Explain the nature of the CM control to be executed for each of the 5 environments. In particular, explain the logical flow of files among these environments and CM controls that are exercised over this flow. EAI Response: Additional details and specifics were added to Section 6.2 to elaborate on the differing levels of CM control exercised for different types of changes

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117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
					(Development environment vs. Production at the data center)
This table lists 15 systems, but does not discuss any CM applied to any of these systems.	Page 8, 2.6.1	IV&V	3/20/2003	Y	Explain the nature of CM applied to listed systems. In particular, identify which systems are under CM control. EAI Response: EAI is not responsible for configuration management for all of the systems with which it interfaces. Each of those systems is responsible for their own activities. EAI's SCM responsibilities are limited to the specific files identified in the EAI SCM Configuration Items Index (Appendix A).
Steps 2 and 3 in these tables appear to be the same step.	Page 12, section 3.4.1 table steps 2 & 3 Page 14, section 5.1.1 table steps 2 & 3	IV&V	3/20/2003	Y	Explain difference between steps 2 and 3. EAI Response: Step # 2 was indeed redundant and was removed from the table.
These 2 sections both reference Steps 1-6 in Appendix F. Steps 7-13 in Appendix F are not referenced.	Page 13, sections 4.1 and 4.2	IV&V	3/20/2003	Y	Explain how all 13 steps, defined in Appendix F, are performed during "Packaging". EAI Response: Added reference to steps 7-13.
This section discusses extracting and applying MQSeries Objects, but does not explain how this is performed nor its relationship to "Packaging".	Page 13, section 4.4	IV&V	3/20/2003	N	Explain MQSeries Objects in the context of "Packaging" an EAI Build. EAI Response: Packaging is limited to extraction of the MQSeries Object definitions from ClearCase.
This section discusses extracting and ftp MQSI Message	Page 13, section 4.5	IV&V	3/20/2003	N	Explain MQSI Message Flows/Sets in the context of

117.1.4 EAI Configuration Management Plan – Significant Concerns

Suggested Changes/Comments	Page	Author	Date	Change Made Y/N	Comment
Flows/Sets, but does not explain how this is related to "Packaging".					"Packaging" an EAI Build. EAI Response: Packaging is limited to extraction of the MQSI Message flow/set scripts from ClearCase.
Migration Validation is discussed in section 5.3, but is not mentioned in table in section 5.1.2	Page 15, section 5.1.2 Page 16, section 5.3	IV&V	3/20/2003	Y	Explain when Migration Validation occurs. EAI Response: Provided additional clarification to Section 5.3.
Statement is made "Depending on the impact to the FSA, the severity … will be assigned as either emergency or non-emergency". It appears but is not clearly stated that the EAI team will make the decision whether the severity is an emergency or non-emergency. This decision is important because it will determine how promptly changes are made.	Page 17, section 6	IV&V	3/20/2003	Y	Clarify which individual(s) have the authority/responsibility for making an emergency versus non-emergency decision. EAI Response: Extensive indications added to section 6.0 outlining the process that CRs move though when input to the ECM Tool
Statements are made "The Diagram below illustrates … non-emergency changes in Production". It is indicated that the diagrams on page 17 and 18 both illustrate the non-emergency change process. section 6.1 discusses Emergency Change and should have a diagram for emergency rather than non-emergency change.	Page 17, section 6.1, diagram and section 6.2, diagram	IV&V	3/20/2003	Y	Reference diagram for emergency change. EAI Response: Section 6.1 references and diagrams the process flow for emergency changes and this additional clarification added: "Emergency Changes are distinguished from non-emergency changes in that "emergencies" are immediately "called-in" to the Data Center's command Center/Help Desk for immediate resolution (as shown in diagram)."
Diagram indicates the following actions: • Test Fix • Did Fix Resolve Issue There is no clear indication of	Page 17, section 6.1, diagram	IV&V	3/20/2003	Y	Clarify who is responsible for completing each action shown on this diagram. EAI Response: Added clarification

117.1.4 EAI Configuration Management Plan – Significant Concerns

Suggested Changes/Comments	Page	Author	Date	Change Made Y/N	Comment
who is responsible for each action shown on the diagram.					statement to 6.1 and 6.2 that the responsible role for each action is listed under each and every action in the diagram…see the parenthesis under each action.
Diagram is confusing with respect to the environment where fixes are initially made and where testing is performed. The actions "Text Fix" and then "Apply Fix to Production environment" appear to indicate that fixes and testing are initially not performed on the Production environment.	Page 17, section 6.1, diagram	IV&V	3/20/2003	Y	Clarify the environment(s) in which diagram actions, e.g., testing (Test Fix), will be performed. Clarify if any testing will be performed on the Production system to ensure that fix is correct in that environment as well as development environment. EAI Response: Provided clarification to diagram.
Diagram does not indicate where and how CM is involved in this process.	Page 17, section 6.1, diagram	IV&V	3/20/2003	N	Show where CM is involved in process shown on the diagram. EAI Response: The diagram references very specific CM activities (see steps involving ClearCase…which as previously noted is the EAI Team's primary CM Tool)
Statement "Complete DEV environment" is in initial box. The meaning of this statement is unclear.	Page 18, section 6.2, diagram	IV&V	3/20/2003	Y	Explain "Complete DEV environment". EAI Response: The box refers to the fact that the development environment is complete. Additional clarification is added to the section.
There is no action indicated that any testing or final verification/checking will be performed on Production after changes are moved to Production.	Page 18, section 6.2, diagram	IV&V	3/20/2003	Y	Identify what if any testing or checking will be performed on the Production system after changes are finally moved to Production. Identify who is responsible for verifying that changed software, moved to Production, is correct in

117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
					Production. EAI Response: Directly addressed by extensive discussion of the ECM Tool Process in section 6.0.
Appendix A is listed on page 3, Section 1.2, but there is no discussion about the relationship of the EAI Source Code files to CM. There is no indication if the subsections list all source files. If the listed files are complete and accurate as of the date of this CM Plan, is CM now responsible for maintaining an up-to-date list of source files that is complete and accurate? There is no indication how complete and up-to-date/current the information is in Appendix A. Only one of the subsections in section 7 has a lead-in discussion. Furthermore, the first subsection presented is 7.1.1 rather than 7.1. Subsections are really just separate lists that are not discussed and could be presented in a table(s)	Pages 19 - 27, section 7 Appendix A and subsection 7.1.1 through 7.1.8.1	IV&V	3/20/2003	Y	The contents of Appendix A should be explained with respect to CM responsibilities. Explain how this information is to be used and/or maintained for CM purposes. The files listed in each numbered subsection, which should begin with 7.1 rather than 7.1.1, should be explained or be presented in a table(s) which is/are explained. EAI Response: Appendices no longer have "section numbers" Relation of source files to CM is that all files listed as part of the Production Code Baseline Configuration Item Index (CII) are maintained under SCM. Added clarification on date of current EAI Production Code Baseline CII.
Appendix B is listed on page 3, section 1.2, but there is no discussion about the purpose/use of the listed ClearCase UNIX Command Line Interface Commands with respect to CM. It is indicated in the document that ClearCase is being used for CM, but the information presented in Appendix B is	Pages 28, section 8 Appendix B	IV&V	3/20/2003	N	The contents of Appendix B should be explained with respect to CM processes (e.g., how is this information/list of commands to be used and by whom). Explain the purpose/use of the ClearCase Commands listed in subsections 8.1.1 through 8.1.11.

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117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
inadequate as instructions for using ClearCase. The first subsection presented is 8.1.1 rather than 8.1. These subsections are really just separate commands that are not discussed and could be presented in a single table.					The commands listed in each numbered subsection, which should begin with 8.1 rather than 8.1.1, should be explained or be presented in a table(s) which is/are explained. EAI Response: The detailed technical information in Appendix B is intended for technical resources that are familiar with such formatting for this type of information. With regard to detailed instructions for using ClearCase, such training (from the Rational Software Company as well as internally developed information is always available to Team members but are not included in their entirety in this plan. A reference to the available training for Rational ClearCase was added to section 2.4.1.
Statement "Reason for change validated". How is the reason for a change validated? Who is contacted other that the individual who sent the change request?	Page 29, section 9 Appendix C, 3rd bullet	IV&V	3/20/2003	Y	Explain how the reason for a change is validated. EAI Response: Addressed extensively in sections 6.1 and 6.2 (ECM Tool Process) Clarification added to Appendix C to ensure that required fields are completed
How are the indicated items in an Email verified?	Page 30, section 10.1.1, 2nd, 3rd, and 4th bullets	IV&V	3/20/2003	Y	Explain how the contents of an Email are verified. EAI Response: Updated bullets to state that the "required fields" are completed

117.1.4 EAI Configuration Management Plan – Significant Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
Statement "Reason for migration validated". How is the reason for a migration validated? Who is contacted other that the individual who sent the migration request?	Page 30, section 10.1.1, 5th bullet	IV&V	3/20/2003	Y	Explain how the reason for a migration is validated. EAI Response: Updated bullets to state that the "required fields" are completed. Addressed in sections 6.1 and 6.2 (ECM Tool Process)
Neither Release Notes nor Staging are discussed in section 5 Migration. How are Release Notes prepared and what is done with them?	Page 30, sections 10.1.3 and 10.1.4	IV&V	3/20/2003	Y	Explain the processes of preparing Release Notes and of Staging here and/or in section 5. EAI Response: Clarification provided in Release Notes sections of Appendix D
The relationship of the MQSI Migration Procedures in Appendix E to CM is not explained.	Pages 31 - 37, section 11	IV&V	3/20/2003	Y	Explain how MQSI Migration Procedures are to be used during CM. EAI Response: Clarification provided in Section 5.2.3.
Statement "These items should be exported on a weekly basis …" Are all items going to be exported every week whether they are changed or not?	Page 31, section 11, 1st paragraph	IV&V	3/20/2003	Y	Explain need to export on weekly basis. EAI Response: Procedures updated to exclude incorrect statement.

117.1.4 EAI Configuration Management Plan – Minor Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
Page numbers listed in Table of Contents do not align with text.	Table of Contents	IV&V	3/20/2003	Y	Correct page numbers in Table of Contents to match text. EAI Response: Corrected page numbers
Normal document convention is not to assign section numbers to appendices that also have letter designators.	Appendices	IV&V	3/20/2003	Y	Decide if appendices are to be appendices or sections. Also provide an introduction within each appendix explaining its purpose/use. EAI Response: Appendices are no longer shown as sections and introductory statements are provided.
Wording "Provides a overview …"	Page 3, section 1.2, 2nd bullet	IV&V	3/20/2003	Y	Change "a" to "an". EAI Response: Change made
Wording "… to MQSeries than provides bulk …" Wrong word for "than".	Page 7, section 2.6, 3rd sentence	IV&V	3/20/2003	Y	Change "than" to "that" EAI Response: Sentence removed
Wording "The detailed steps … is defined …" Wrong word for "is".	Page 12, section 3.4.1, 2nd sentence	IV&V	3/20/2003	Y	Change "is" to "are". EAI Response: Change Made
These sections describe procedures for submitting a Source Code Check-In Request (via email). The procedures are for a file. It is unclear if a separate email is needed for each file identified for check-in or if the same email request can be used for a set of related files.	Page 12, section 3.4.1 and page 29, section 9	IV&V	3/20/2003	Y	Clarify the Source Code Check-In process for a set of related files. EAI Response: Clarification provided
This step to "Perform Code Check-In Checklist" should reference section 9 Appendix C that contains the Source Code Check-In Checklist.	Page 12, section 3.4.1, table step 3	IV&V	3/20/2003	Y	Reference section 9 Appendix C at step 3 in the table. EAI Response: Reference provided
Wording "The packaging of a EAI build …"	Page 13, section 4	IV&V	3/20/2003	Y	Change "a EAI" to "an EAI". EAI Response: Change made

117.1.4 EAI Configuration Management Plan – Minor Concerns

Suggested Changes/Comments	Page	Author	Date	Change Made Y/N	Comment
This step to "Perform Migration" should reference section 10 Appendix D that contains the Migration Checklist.	Page 14, section 5.1.1, table step 3	IV&V	3/20/2003	Y	Reference Appendix D at step 3 in the table. EAI Response: Reference provided
Appendix C is listed on page 3, section 1.2, but there is no further reference to Appendix C. For example on page 12, subsection 3.4.1, step 3, states: "Perform Code Check-in Checklist …", but does not reference Appendix C.	Pages 29, section 9 Appendix C	IV&V	3/20/2003	Y	Explain who is to use and how they are to use the Source Code Check In Checklist presented in Appendix C. EAI Response: Clarification provided in Appendix C regarding Code Check-in procedures.
Wording "Code diffed" appears to be an abbreviated way of saying invoke the DIF command to compare the code in 2 files (i.e., the checked in source code against previous and current Production versions of this code).	Page 30, section 10.1.2, 3rd and 4th bullets	IV&V	3/20/2003	Y	Clarify two "code diffed" statements. Also explain the purpose of invoking the DIF command after (rather than before) the source code is checked-in using ClearCase. EAI Response: Clarification provided in Appendix D
Wording "… that is apart of …"	Page 31, section 11.1.2, item 3	IV&V	3/20/2003	Y	Change "apart" to "a part". EAI Response: Change made
These two sections that are each identified as an Export Process, but item 1 for each process uses the word "import".	Page 32, sections 11.1.4 and 11.1.5	IV&V	3/20/2003	Y	Change "import" to "export" for item 1. EAI Response: Change made
Wording "Ensure that the information window that does not show that …"	Page 33, section 11.2.2, item 2.b	IV&V	3/20/2003	Y	Change "window that does" to "window that appears does". EAI Response: Change made
Wording "… from EAIP1 and EAIP2 broker are …"	Page 34, section 11.3.1, 1st bullet 3rd item and 2nd bullet, 5th item	IV&V	3/20/2003	Y	Change "broker" to "brokers". EAI Response: Change Made

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117.1.4 EAI Configuration Management Plan – Minor Concerns					
Suggested Changes/Comments	**Page**	**Author**	**Date**	**Change Made Y/N**	**Comment**
All these subsections made the statement "Refer to MQSI User Documentation". The referenced documentation is very extensive.	Page 34, sections 11.3.2, 11.3.3, 11.3.4, and 11.3.5	IV&V	3/20/2003	Y	Provide more specific reference for each process in order to assist readers in finding appropriate information. EAI Response: Provide reference to IBM MQSI documentation.
Wording "… steps to import the all the MQSI configuration items …"	Page 35, section 11.4, item 5	IV&V	3/20/2003	Y	Delete first "the". EAI Response: Change Made
Wording "These configuration items includes:"	Page 35, section 11.4, item 6	IV&V	3/20/2003	Y	Change "includes" to "include". EAI Response: Change Made
There is no statement introducing listed bullets.	Page 35, section 11.4, item 7 bullets	IV&V	3/20/2003	Y	Explain bullets. EAI Response: Statement provided
It is unclear why some of the text in the sample is underlined and is marked with a line bar in the right margin.	Page 36, section 11.4.2, sample	IV&V	3/20/2003	Y	Clarify marked text. EAI Response: Marked text no longer appears
Wording "The some common errors …"	Page 39, section 12.1, item 12, 3rd bullet	IV&V	3/20/2003	Y	Change "The some" to "Some". EAI Response: Change Made
Wording "Follow Steps 7-13 …" Unclear which steps 7 through 13 are referenced, but appear to be the steps listed in section 12.1.	Page 40, section 12.2, item 3	IV&V	3/20/2003	Y	Clarify the reference to steps 7-13. EAI Response: Clarification provided in Section 4.2
Wording "… execution of the of the"	Page 40, section 12.2, item 3	IV&V	3/20/2003	Y	Delete one "of the". EAI Response: Change Made
Wording "Migration Validation Prodcedures".	Page 41, section 13 Appendix G	IV&V	3/20/2003	Y	Change "Procedures" to "Procedures". EAI Response: Change Made

cc:
Janet Scott
Ganesh Reddy